July 3, 2002

MODIS sensor Working Group (MsWG) Summary

Attendance: Bill Barnes, Stuart Biggar, Vincent Chiang, Roger Drake, Wayne Esaias, Bob Evans, Gene Feldman, Chris Moeller, Junqiang Sun, Gary Toller, Jack Xiong, Eric Vermote, Zhengming Wan, Joe Esposito

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Scheduled Items

Item 1 Terra MODIS Status

Formatter Issue and Swap Plan

BB) The TIGER team (lead: Mitch Davis) recommendation is to change the Aside to Bside formatter only. This produces the least risk to the instrument. At present the 1B errors have stopped occurring and we will wait for things to get worse before changing the formatter from Aside to Bside. There is no known formatter failure mode that would prevent changing formatter. The error rate is still rising.

WE) Oceans recommends swapping sides now in order to keep data consistent once the instrument is calibrated.

BB) We believe it may be difficult to re-start the Aside formatter once we have transferred to Bside thus we would like to 'conserve' formatters if possible.

RD) The error rate is up to ~15M per day. We cannot predict when Aside will cease to work.

BB) We will take Oceans comment under advisement.(*MsWG Action*)

JX) 1B errors do not appear to have affected the science data yet. We have to also look if instrument does not complete processing without 1B error. (*MCST action*)

BB) We are 99% confidant that Bside will work but it is not a 100%.

Item 2 Aqua MODIS Status

Aqua S/C Safe Mode (06/27 – 06/28)

MODIS Safe to Standby on July 01 and to Science Mode on July 02

FPA will be at 83K on July 03

BB) The cold FPA are not quite at 83_K.

SRCA data analyzed (still waiting for spatial data)

JX) There is still some spatial test data not available from the DAAC but otherwise the data looks very good.

We are doing an SD calibration on July 4. This will be useful in determining if any new B6 detectors have started to go/gone bad due to safe mode temperature cycling.

BE) Can we estimate when the cold FPAs will be at 83_K.

RD) About 9PM East coast time tonight [July 3].

Moon observation looks good (no obvious PCX, smaller SWIR X-talk than PFM)

JX) Moon data through the SVD can access the extent of PC crosstalk. We can see that the electronic X-talk is much smaller for Aqua than for Terra, the

PC bands are much cleaner. The PC thermal leak has also been removed on Aqua and we may wish to remove the correction from the L1B code. SWIR bands show some electronic X-talk but much smaller than Terra. The basic message is that although not completely gone, the electronic X-talk has been dramatically reduced on Aqua. For FM1 sub-frames are very similar, almost the same.

RD) Electronic X-talk correlates with the sub-frame difference for Terra implying that both are reduced for Aqua.

EV) One detector on B7 appears noisy. B26 looks better but one detector is a problem.

JX) SWIR thermal leak correction is currently set to off. We will be getting day mode at night data this weekend if possible. This will be used to get the thermal leak correction coefficients. The results will be shown at the MST workshop.

Around the Table

Participant: Bob Evans - We have gotten L1B V4 coefficient and see a continued trend. The same has been done for Aqua. Aqua requires detector-detector cross scan correction. D-D difference is much smaller for FM1. We are also comparing Aqua and Terra water leaving radiance. Terra PC bands agree well with buoy and Pathfinder but Aqua yields SSTs that are too large (agreement near SST= 0°C but differences of approximately 2°C for SST near 30°C). The data is, however, very stable.

JX) B31-32 are currently calibrated using b1 (a0 and a2 are set to zero). The B31-32 PC bands are very non-linear and will be affected by this correction. A second set of on-orbit calibration data, with the NAD opened, will be taken and analyzed within about a week. We will supply a new a2 coefficient after checking the results against calibration data when NAD is closed.

Participant: Chris Moeller - Will get and deliver new coefficients for Aqua. B36 seems a little noisy, but is still better than Terra.

BB) There is one noisy detector on B36.

Participant: Stuart Biggar - We will be at RRV next week for in-situ measurements.

No MsWG meeting on July 10, 2002. The next meeting is on July 17, 2002.

Compiled by J. A. Esposito July 3, 2002